

**SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY
SURAT – 395 007 (GUJARAT)**



Name in Full : **Dr. JIGNESH N SARVAIYA**

Postal address : ELECTRONICS ENGINEERING DEPARTMENT
S V NATIONAL INSTITUTE OF TECHNOLOGY
SURAT-395007
9924728285
jns@eced.svnit.ac.in

Present position : **ASSOCIATE PROFESSOR**

Qualifications : **B.E., M.Tech. (IIT, Bombay), Ph.D.**

Ph. D. Thesis Title : **EFFICIENT FEATURE EXTRACTION TECHNIQUES FOR
IMAGE REGISTRATION**

Area of Interest : **Signal & Image Processing, Machine Vision,
Bio-Medical Instrumentation, Electronics System Design**

Research Publications :

Sr. No.	Title of Paper	Name of Journal / Conference / Publisher	Page Nos., Volume, Issue No. & Year
International Journal			
1.	Performance Evaluation of Direct Sequence Spread Spectrum of CDMA Technology with AWGN Channel using Matlab/Simulink	International Journal of Engineering and Technology	pp. 11-20 Vol. 1, No.2 Dec. 2008
2.	Performance Evaluation of Direct Sequence Spread Spectrum CDMA Transceiver Hardware Using Pseudo Code and Code Modulation Technique.	International Journal of Engineering Research & Industrial Application (IJERIA)	pp. 1-13 Vol. 1, No.2 March 2009
3.	BER Vs SNR Performance Comparison of DSSS FPGA Based Hardware with AWGN, Spreading Codes & Code Modulation Techniques	International Journal of Electronics Engineering Research	pp.155-168 Vol.1,No.2, August 2009

4.	Image Registration using NSCT and Invariant Moments	International Journal of Image Processing, CSC Journals, Kuala Lumpur, Malaysia ISSN (Online): 1985-2304	pp.119 - 130 Vol.4, Issue 2 May 2010
5.	Automatic Image Registration Using Mexican Hat Wavelet, Invariant Moment, and Radon Transform	International Journal of Advanced Computer Science and Applications, Special Issue on Image Processing and Analysis	pp.75-84 Sp. Issue No.1 June 2011
6.	Image Registration Using Log Polar Transform and Phase Correlation to Recover Higher Scale	Journal on Pattern Recognition Research (JPRR)	Vol.7 No.1, pp. 90-105, Feb.2012.
International Conference :			
1.	Real Time Implementation of LPC-10 Coder Using TMS320C6713	International Conference on Communication, Computers and Instrumentation at Vivekanand Education Society's Institute of Technology, Chembur, Mumbai, INDIA.	pp.147-151, January 02-03, 2009
2.	Design of RF Front End Transceiver for Low Data Rate Communication	International Conference on Communication, Computers and Instrumentation at Vivekanand Education Society's Institute of Technology, Chembur, Mumbai, INDIA.	pp.152-155, January 02-03, 2009
3.	Automated Hybrid Temporal Image Registration Using Radon Transform	The Eleventh IASTED International Conference on Signal and Image Processing, Honolulu, Hawaii, USA.	pp.90-94, August 17-19, 2009
4.	Temporal Image Registration Using GCPs and Bivariate Polynomial Estimation	The Eleventh IASTED International Conference on Signal and Image Processing, Honolulu, Hawaii, USA.	pp.95-100, August 17-19, 2009
5.	Image Registration Using Log-Polar Transform and Phase Correlation	International Technical Conference of IEEE Region 10, TENCON2009, IEEE Singapore Section, Singapore.	November 23-26, 2009
6.	Image Registration By Template Matching Using Normalized Cross-Correlation	International Conference on Advances in Computing, Control, and Telecomm. Technologies, Association of Computer, Electronics and Electrical Engineers Trivandrum, Kerala, INDIA	pp.819-822, December 28-29, 2009
7.	Different Speed Optimizations For MPEG AAC Encoder	International Conference on Advances in Computer Engineering, Bangalore, INDIA.	June 21-22, 2010

8.	Image Registration Using Mexican-Hat Wavelets and Invariant Moments	Computer Networks and Information Technologies, Second International Conference on Advances in Communication, Network, and Computing, CNC 2011, Bangalore, India, Proceedings Available Online on Springer Verlag.	pp.574-577 March 10-11, 2011.
9.	Interactive Image Registration Using Active Contour and Radon Transform	The IASTEAD International Conference on Computational Photography-(Cphoto-2011) Vancouver, BC, Canada.	July,1-3, 2011
10.	Feature Based Image Registration Using Hough Transform	International Conference on Electrical, Computer, Electronics & Biomedical Engineering (ICECEBE'2011), Bangkok, Thailand.	July 8-9, 2011 Awarded Best Paper
National Journal			
1.	Impedance Simulator For Testing of Instruments For Bio Impedance Sensing	IETE Journal of Research	pp. 203-207 Vol. 54, No.3 May 2008
2.	An Impedance Detector for Glottography	IETE Journal of Research	pp.100-105, Vol.55 No. 3, May 2009
National Conference			
1.	Convolution Coded OFDM - Performance Analysis Includes Interleaver For Different Code Rate	National Conference on Advanced Communication Techniques-2008, A.C.College of Engineering & Tech., Karaikudi	pp.45, Vol 1, March,9, 2008
2.	Code Excited Linear Predictive Coder at 8.5 kbps and 7.2 kbps	National Conference on Advanced Communication Techniques-2008, A.C.College of Engineering & Tech., Karaikudi	pp.51, Vol 1, March,9, 2008
3.	A 0.25 μ m CMOS LNA DESIGN for 2.4GHz Application	Second National Conference on Communication Technologies-2008, NCCT'08, Mepco Schlenk Engineering College, Sivakasi	pp. 295-298, March 14-15, 2008
4.	Comparison of MIMO Channel Capacity with various Wireless Channel models	National conference on Technological Innovation, BRCM College Of Engg. & Tech, Bhiwani, Haryana	pp. 262-264, Vol 1, October, 11-12, 2008
5.	Psychoacoustic Model for MPEG Advanced Audio Coding	National Conference on Current Trends In Technology, Nirma Institute of Technology, Ahmadabad	pp.338-342 November 27-29, 2008
6.	Computationally Efficient Psychoacoustic Model for MPEG Advanced Audio Coding (AAC)	National Conference on Advancements in Wireless Technologies & Applications, SVNIT, Surat	pp.105-110, December 18-19, 2008

7.	Linear Predictive Coder at Various Bit Rates	National Conference on Advancements in Wireless Technologies & Applications, SVNIT, Surat	pp. 62-67, December 18-19, 2008
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Review of Books:

Sr. No.	Name of Book(s)	Publisher
1.	Digital Image Processing by S Jayraman, S Esakkirajan & T Veerkumar	McGraw-Hill
2.	Information Theory, Coding and Cryptography by Ranjan Bose	McGraw-Hill
3.	New Script on Electronic Principles by Malvino	McGraw-Hill
4.	Electronic Principles by Malvino	McGraw-Hill

Dissertations Guided:

M.E. /M. Tech.	M.Tech. – 15 M.Tech. (R) - 1
Ph.D.	1 (Under Guidance)

Conference/ Workshop / Seminar / Short Courses etc. Organized:

Sr. No.	Institute / Organization	Title	Duration		
			From	To	Days
1.	ECED, SVNIT Under SMDP-II	National level 2 days workshop on VLSI System Design As a Coordinator	28 Feb, 2009	01 March, 2009	3 Days
2.	ACM, SVNIT Chapter	ACM QUEST 2008 As a Faculty Advisor	27 Sept., 2008	28 Sept., 2008	2 Days
3.	AICTE, DST, CSIR, SVNIT	National Conference on Advancements in Wireless Technologies and Applications As an Organizing Committee Member	18 Dec 2008	19 Dec 2008	2 Days
4.	ECED, SVNIT, AICTE sponsored	STTP on Teaching with MATLAB and SIMULINK, As a Co-Coordinator	21 Dec, 2009	25 Dec, 2009	1 Week
5.	ECED, SVNIT Convener Dr. U. D. Dalal Coordinators Dr. V. Mishra Prof. N. B. Kanirkar Dr. J. N. Sarvaiya	1st International Conference On Emerging Technology Trends in Electronics, Communication & Networking	19 Dec, 2012	21 Dec, 2012	3 Days
6.	ECED, SVNIT, TEQIP-II SPONSORED	3-Days Workshop on Computing for Image Analysis As a Coordinator	6 th June 2013	8 th June 2013	3 days
7.	Electronics Engg. Dept., NMEICT live from IIT, Kharagpur.	10 Days Workshop on Signals and Systems As a Coordinator	2 nd Jan 2014	12 th Jan 2014	10 Days

Sponsored Research Projects undertaken :

Sr. No.	Title	Sponsoring Agency	Fund Sanctioned Lacs of Rs.	Duration	Status
1.	Fabrication and characterization of a porous silicon and its application as an optical biosensor (Dr. V Mishra , Prof. P N Patel, Dr. J N Sarvaiya)	Central Govt. Funded. DRDO	30 LACS	3 YEARS	Ongoing

Expert Lecturers Delivered :

Sr. No.	Title of the Lecture	Place of Delivering	Date	Event
1.	Analog Modulation Scheme	Valia Institute of Technology, Bharuch	January 2008	Lecture Series on Communication System
2.	Switching Mode Power Supply	Valia Institute of Technology, Bharuch	January 2008	Lecture Series on Electronics System Design
3.	Digital Circuits	ISF organized at SVNIT, Surat	18-19 Sept'10	Workshop on VHDL
4.	Introduction to MATLAB and Application (Including practice session)	ISF organized at ECED SVNIT, Surat	26-27 March 2011	Two days workshop on MATLAB
5.	Image Registration Techniques	Parul Institute of Technology, Vadodara	26 July 2013	Key Note Speaker in STTP

Member of Technical Societies:

Sr. No.	Name of Association / Society	Category	Membership No.
1.	ISTE	Life Member	M-209753
2.	IJERIA	Life member	LM-2223
3.	IEEE	One Year	91128004

Dr. J N Sarvaiya
Associate Professor,
ECED, SVNIT, Surat-7
9924728285